



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

tubers is a fair index of the comparative intensity of respiration in the tissues. The data from both plant and animal tissues available at the present seem to justify the general indication that catalase action is invariably correlated with the oxidative processes involved in respiration."—WM. CROCKER.

Respiration of stored wheat.—BAILEY and GURJAR¹⁸ have done an excellent piece of work on the respiration of stored wheat. Significant literature is well presented and related to the work in hand, and the methods used in the work are clean cut and exact. The contribution has a very important application in the shipping and storage of grains. They worked with moisture contents ranging from 12 to 18 per cent, such as appear in the practical handling of grains. The following are the more important results.

Respiration gradually and fairly uniformly rises with moisture content up to 14.5 per cent in case of plump spring wheat. With the rise of moisture above this percentage the respiration is markedly accelerated. The soft starchy wheats respire more rapidly than the hard vitreous wheats containing the same percentage of moisture. With more than 14 per cent moisture shriveled wheat respire 2 to 3 times as fast as plump wheat of the same water content, due to a larger percentage of embryo in the shriveled grains; with less than 14 per cent moisture there is little difference.

Freshly dampened wheat respire more slowly than wheat of the same water content that has been dampened for a long time or that has been naturally dampened. The difference is noticeable at 13 per cent moisture, and rises as the moisture rises. Wheat stored at room temperature respire more rapidly than that of the same moisture content at lower out-door temperatures. Unsoundness of wheat caused by the freezing of unripe plants increases respiration. This is attributed to the accumulation of glucose in the frosted grains. Increased temperature increases the respiration up to 55° C. When seeds are stored in closed chambers and the respiration taken by 4-day periods, the rate is highest for the first period and diminishes materially in successive periods as the carbon dioxide content rises. The respiration is also reduced in an oxygen free atmosphere, the ratio to that occurring in a normal atmosphere being about 1:2.5.

Many will think the author's evidence for their viscosity conception of limited respiration is insufficient. They will also question whether the amount of glucose present limits respiration when low moisture has already run respiration to so low an ebb.—WM. CROCKER.

Relation of host and parasite among fungi.—An excellent service has been rendered by REED¹⁹ in bringing together the extensive and scattered data regarding the susceptibility of more or less related hosts to physiological strains

¹⁸ BAILEY, C. H., and GURJAR, A. M., Respiration of stored wheat. Jour. Agric. Research 12:685-713. 1918.

¹⁹ REED, GEORGE M., Physiological specialization of parasitic fungi. Mem. Brooklyn Bot. Gard. 1:348-409. 1918.